

IN THE CLAIMS

25 Please amend claims 3-9, 12-13, 15-18 and 20-22, shown below in the set of all existing claims, as follows. No additional fees are required because the Amendment still has 22 claims, as filed.

1 1. **(Previously Amended)** A method for pre-processing an access plan generated for
2 a query in a relational database management system to include a direct call mechanism replacing
3 a lookup function of a run-time interpreter, said access plan including a plurality of operation
4 codes, each of said operation codes being associated with one or more executable functions for
5 performing the query, said method comprising the steps of:

6 (a) determining from the access plan an executable function associated with a first
7 operation code; and

8 (b) augmenting said first operation code in the access plan with a pointer to said
9 executable function to provide a direct call mechanism replacing a lookup function of a run-time
10 interpreter.

1 2. **(Original)** The method as claimed in claim 1, further comprising repeating steps (a) and
2 (b) for the remaining operation codes in the access plan.

1 3. **(Currently Amended)** The method as claimed in claim 1, wherein said step (b)
2 comprises:

3 augmenting said first operation code in the access plan with a pointer to an intermediate
4 function, ~~said intermediate function including having~~ a data structure, and
5 for-storing a pointer to said executable function in the data structure.

1 4. **(Currently Amended)** The method as claimed in claim 3, wherein said data structure
2 includes comprises means for storing information associated with said executable function or
3 said first operation code.

1 5. **(Currently Amended)** The method as claimed in claim 1, wherein said step (b)
2 comprises augmenting said first operation code in the access plan with another ~~a second~~ pointer
3 to a data structure, said data structure providing means for storing information associated with
4 said first operation code or said executable function.

1 6. **(Currently Amended)** The method as claimed in claim 1, ~~wherein said step (a) further~~
2 comprising a step of assessing the executable function associated with the first operation code
3 and, if applicable, replacing the direct call to the executable function with a direct call to a
4 ~~second another~~ executable function.

1 7. **(Currently Amended)** The method as claimed in claim 3, wherein said intermediate
2 function comprises includes processing operations for the first operation code or the executable
3 function associated with the first operation code.

1 8. **(Currently Amended)** The method as claimed in claim 7, wherein said processing
2 operations in the intermediate function comprise include gathering statistics on the use of the
3 executable function associated with the first operation code.

1 9. **(Currently Amended)** The method as claimed in claim 7, wherein said processing
2 operations in the intermediate function comprise include a pause for receiving user input before
3 or after the direct call to the executable function.

1 10. **(Previously Amended)** A computer program product for use on a computer wherein
2 queries are entered by a user for retrieving data in a relational database management system
3 having a query optimizer for generating an access plan for executing the query, said query

4 optimizer including a direct call mechanism replacing the lookup function of a run-time
5 interpreter, said computer program product comprising:
6 a recording medium;
7 means recorded on said recording medium for instructing said computer to perform the
8 steps of:
9 (a) determining an executable function associated with a first operation code in the
10 access plan, the first operation code being one of a plurality of operation codes; and
11 (b) augmenting said first operation code in the access plan with a pointer to said
12 executable function to provide a direct call mechanism replacing a lookup function of a run-time
13 interpreter.

1 11. (Original) The computer program product as claimed in claim 10, the means for
2 instructing said computer further comprising repeating steps (a) and (b) for the remaining
3 operation codes in the access plan.

1 12. (Currently Amended) The computer program product as claimed in claim 10, wherein
2 said step (b) comprises:
3 augmenting said first operation code in the access plan with a pointer to an intermediate
4 function, ~~said intermediate function including having a data structure, and~~
5 ~~for-storing a pointer to said executable function in the data structure.~~

1 13. (Currently Amended) The computer program product as claimed in claim 12, wherein
2 said data structure ~~comprises includes~~ means for storing information associated with said
3 executable function or said first operation code.

1 14. (Original) The computer program product as claimed in claim 10, wherein said step (b)
2 comprises augmenting said first operation code in the access plan with another pointer to a data
3 structure, said data structure providing means for storing information associated with said first
4 operation code or said executable function.

1 15. (Currently Amended) The computer program product as claimed in claim 10, wherein
2 ~~said step (a)~~ further comprising a step of includes assessing the executable function associated
3 with the first operation code and, if applicable, replacing a the direct call to the executable
4 function with a direct call to another executable function.

1 16. (Currently Amended) The computer program product as claimed in claim 12, wherein
2 said intermediate function comprises includes processing operations for the first operation code
3 or the executable function associated with the first operation code.

1 17. (Currently Amended) The computer program product as claimed in claim 16, wherein
2 said processing operations in the intermediate function comprise include gathering statistics on
3 the use of the executable function associated with the first operation code.

1 18. (Currently Amended) The computer program product as claimed in claim 16 +2,
2 wherein said processing operations in the intermediate function comprise include a pause for
3 receiving user input before or after a the direct call to the executable function.

1 19. (Previously Amended) A relational database management system for use with a
2 computer system wherein queries are entered by a user for retrieving data from tables, the
3 relational database management system including a query optimizer for generating an access

4 plan associated with the queries entered by the user, said query optimizer including a direct call
5 mechanism replacing a lookup function of a run-time interpreter, said relational database
6 management system comprising:

7 (a) means for determining an executable function associated with each of a plurality
8 of operation codes in the access plan; and

9 (b) means for augmenting said operation codes in the access plan with a pointer to
10 said executable function associated with each operation code to provide a direct call mechanism
11 replacing a lookup function of a run-time interpreter.

1 20. **(Currently Amended)** The relational database management system as claimed in claim
2 19, wherein said means for augmenting said operation codes further comprises includes means
3 for replacing said operation codes in the access plan with a pointer to an intermediate function,
4 and wherein said intermediate function comprises including a data structure for storing a pointer
5 to said executable function.

1 21. **(Currently Amended)** The relational database management system as claimed in claim
2 20, wherein said data structure comprises includes means for storing information associated with
3 said executable function or said operation codes.

1 22. **(Currently Amended)** The relational database management system as claimed in claim
2 19, wherein said means for augmenting said operation codes further comprises includes means
3 for adding another pointer to a data structure, said data structure providing means for storing
4 information associated with said operation codes or said executable function.